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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/901,520	07/09/2001	David W. Smith	2000.054300	4919

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EXAMINER

MOORTHY, ARAVIND K

ART UNIT	PAPER NUMBER
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2131

DATE MAILED: 10/25/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/901,520

Applicant(s)

SMITH ET AL.

Examiner

Aravind K Moorthy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 November 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

1. Claims 1-25 are pending in the application.
2. Claims 1-25 have been rejected.

Specification

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract exceeds the 150-word limit.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 1, 3-5, 9-12, 15, 17, 18, 20-22 and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Ganesan et al U.S. Patent No. 5,978,481.**

As to claims 1 and 15, Ganesan et al discloses a communications system, comprising:

a physical layer hardware unit adapted to communicate data over a communications channel in accordance with assigned transmission parameters, the physical layer hardware unit being adapted to receive an incoming signal over

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the communications channel and sample the incoming signal to generate a digital received signal [column 3, lines 26-44]; and

a processing unit adapted to execute a standard mode driver in a standard mode of operation and a privileged mode driver in a privileged mode of operation, wherein the standard mode driver includes program instructions adapted to extract encrypted data from the digital received signal and pass the encrypted data to the privileged mode driver, and the privileged mode driver includes program instructions adapted to decrypt the encrypted data to generate decrypted data including control codes and transfer the control codes to the physical layer hardware unit, the physical layer hardware being adapted to configure its assigned transmission parameters based on the control codes [column 5 line 51 to column 6 line 28].

As to claim 3, Ganesan et al discloses that the privileged mode of operation comprises a system management mode of operation [column 6 line 62 to column 7 line 25].

As to claim 4 and 17, Ganesan et al discloses that the standard mode driver includes program instructions adapted to issue a signal to the processing unit to initiate a change from the standard mode of operation to the privileged mode of operation [column 4, lines 32-52].

As to claims 5 and 18, Ganesan et al discloses that the signal comprises a system management interrupt [column 4, lines 32-52].

As to claim 9, Ganesan et al discloses that the privileged mode driver include program instructions adapted to encrypt the control codes and pass the encrypted control codes to the standard mode driver [column 4 line 53 to column 5 line 3]. Ganesan et al discloses that the

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standard mode driver includes instructions adapted to send the encrypted control codes to the physical layer hardware unit. Ganesan et al discloses that the physical layer hardware unit is adapted to decrypt the encrypted control codes to reconstruct the control codes [column 5, lines 4-20].

As to claim 10, Ganesan et al discloses that the privileged mode driver includes instructions adapted to transfer the control codes directly to the physical layer hardware unit [column 6, lines 29-61].

As to claim 11, Ganesan et al discloses that the processing unit comprises a computer [column 3, lines 26-44].

As to claim 12, Ganesan et al discloses that the computer includes:

- a processor complex adapted to execute the program instructions in the standard mode driver and the privileged mode driver [column 4, lines 32-52];
- a bus coupled to the processor complex [column 3, lines 26-44]; and
- an expansion card coupled to the bus, the expansion card including the physical layer hardware [column 3, lines 26-44].

As to claim 20, Ganesan et al discloses sending the control codes to a communications device adapted to transmit the upstream signal in the privileged processing mode [column 5 line 51 to column 6 line 28].

As to claim 21, Ganesan et al discloses the method further comprising:

- encrypting the control codes in the privileged processing mode [column 5, lines 4-20];

transitioning the processing unit into the standard processing mode [column 5, lines 4-20]; and

sending the encrypted control codes to a physical layer device adapted to transmit the upstream signal in the standard processing mode [column 5, lines 4-20].

As to claim 22, Ganesan et al discloses the method further comprising:

decrypting the encrypted control codes in the physical layer device [column 5, lines 4-20]; and

configuring the physical layer device based on the control codes [column 6, lines 48-61].

As to claim 25, Ganesan et al discloses a modem, comprising:

means for receiving encrypted data over a communications channel in a standard processing mode of a processing unit [column 3, lines 26-44];

means for transitioning the processing unit into a privileged processing mode [column 3, lines 26-44];

means for decrypting the encrypted data in the privileged processing mode [column 5 line 51 to column 6 line 28];

means for extracting control codes from the decrypted data in the privileged processing mode [column 5 line 51 to column 6 line 28]; and

means for transmitting an upstream signal over the communications channel based on transmission assignments defined by the control codes [column 5 line 51 to column 6 line 28].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ganesan et al U.S. Patent No. 5,978,481 as applied to claims 1 and 15 above, and further in view of Fleming, III et al U.S. Patent No. 6,212,360 B1.

As to claims 2 and 16, Ganesan et al does not teach that the control codes include at least one of a power level assignment, a frequency assignment, and a time slot assignment.

Fleming, III et al teaches control codes that include at least one of a power level assignment, a frequency assignment, and a time slot assignment [column 11 line 60 to column 12 line 13].

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Ganesan et al so that the control code would have been power level assignment.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Ganesan et al by the teaching of Fleming, III et al because adjusting power in the modem it helps overcome rain fades in wireless or satellite systems [column 2, lines 39-46].

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6. Claims 6 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ganesan et al U.S. Patent No. 5,978,481 as applied to claims 1 and 15 above, and further in view of Weidner et al U.S. Patent No. 5,987,572.

As to claims 6 and 19, Ganesan et al teaches that the processing unit includes a memory device adapted to store the encrypted data [column 3 line 66 to column 4 line 17].

Ganesan et al does not teach that the standard mode driver includes program instructions adapted to pass a pointer indicating a location of the encrypted data within the memory device to the privileged mode driver.

Weidner et al teaches program instructions adapted to pass a pointer indicating a location of the encrypted data within the memory device to the privileged mode driver [column 4, lines 7-35].

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Ganesan et al so that there would have been program instructions adapted to pass a pointer indicating a location of the encrypted data within the memory device to the privileged mode driver.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Ganesan et al by the teaching of Weidner et al because it protects data communicated between the processor and the memory [column 2, lines 9-12].

7. Claims 7, 8, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ganesan et al U.S. Patent No. 5,978,481 as applied to claims 1 and 15 above, and further in view of Bestock U.S. Patent No. 5,363,449.

As to claims 7, 8, 23 and 24, Ganesan et al does not teach that the privileged mode driver includes program instructions adapted to extract user data from the decrypted data and pass the user data to the standard mode driver. Ganesan et al does not teach that the processing unit includes a memory device adapted to store the user data. Ganesan et al does not teach that the privileged mode driver includes program instructions adapted to pass a pointer indicating a location of the user data within the memory device to the standard mode driver.

Bestock teaches a privileged mode driver that includes program instructions adapted to extract user data from the decrypted data and pass the user data to the standard mode driver. Bestock teaches that the processing unit includes a memory device adapted to store the user data. Bestock teaches that the privileged mode driver includes program instructions adapted to pass a pointer indicating a location of the user data within the memory device to the standard mode driver [column 4, lines 6-66].

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Ganesan et al so that a privileged mode driver would have included program instructions adapted to extract user data from the decrypted data and pass the user data to the standard mode driver. The processing unit would have included a memory device adapted to store the user data. The privileged mode driver would have included program instructions adapted to pass a pointer indicating a location of the user data within the memory device to the standard mode driver.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Ganesan et al by the teaching of Bestock because verification of a user is taking place on an ongoing basis [column 2, lines 9-28].

8. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ganesan et al U.S. Patent No. 5,978,481 as applied to claim 1 above, and further in view of Albrecht et al U.S. Patent No. 6,510,521 B1.

As to claims 13 and 14, Ganesan et al does not teach that the processing unit includes a system basic input output system (BIOS) memory adapted to store the privileged mode driver. Ganesan et al does not teach that the processing unit is adapted to load the privileged mode driver from the system BIOS into a protected memory location during initialization of the computer.

Albrecht et al teaches that the processing unit includes a system basic input output system (BIOS) memory adapted to store the privileged mode driver. Albrecht et al teaches that the processing unit is adapted to load the privileged mode driver from the system BIOS into a protected memory location during initialization of the computer [column 4, lines 23-44].

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Ganesan et al so that a system basic input output system (BIOS) memory would have been adapted to store the privileged mode driver. The processing unit would have been adapted to load the privileged mode driver from the system BIOS into a protected memory location during initialization of the computer.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Ganesan et al by the teaching of Albrecht et al because it provides a more robust approach to preventing unauthorized access to non-volatile storage, in particular, an approach that does not rely on the access method not being known [column 1, lines 27-32].

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aravind K Moorthy whose telephone number is 703-305-1373. The examiner can normally be reached on Monday-Friday, 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz R Sheikh can be reached on 703-305-9648. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Aravind K Moorthy
October 13, 2004


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